LEAFHOPPERS OF THE AGALLIOPSIS VARIABILIS GROUP WITH DESCRIPTION OF A NEW SPECIES[1]

(HOMOPTERA: CICADELLIDAE)

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ABSTRACT—The *variabilis* group of the leafhopper genus *Agalliopsis* is morphologically defined and a key presented for differentiating the three species comprising the group. Structures of the male genitalia of all species are illustrated. One new species, **sonorensis**, from Alamos, Sonora, Mexico, is described.

The *variabilis* group of the genus *Agalliopsis* Kirkaldy is comprised of three species, *saxosa* Ball (1936f:649),[2] *sonorensis*, n. sp., herein described, and *variabilis* Oman (1933b:22). It belongs to the typical subgenus *Agalliopsis* which I have characterized in an earlier paper (Oman, 1970a:1–29). Members of the group are known only from the southwestern United States and adjacent Mexico, and are probably limited in distribution to the Sonoran subregion. According to Ball (1936e:654) *saxosa* occurs on *Rivina humilis* L. (cited as *Rivina portulaccoides*) and *variabilis* on *Mirabilis Bigelovii* Gray (cited as *Mirabilis glutinosa gracilis*). The host plant for *sonorensis* is not known.

The *variabilis* group may be characterized as follows: Forewing with inner anteapical cell closed basally; male genital capsule not enlarged as in the *novella* complex, the plates covering the caudo-ventral opening; Xth segment of male proportionately very large and elaborately modified; pygofer hook simple; female sternum VII subtruncate, not expanded laterally. Color exceedingly variable but pattern of pronotum, when discernible, consisting of a narrow median line on anterior two-thirds, two pair of elongate spots, the anterior pair larger and closer to the median line, often fused with the markings at the anterior border of the pronotum, the posterior pair located latero-caudad of the anterior pair, and sometimes fused with a posterior submarginal band which may be either present or absent. Pronotal markings sometimes completely obscured by other pigments in very dark specimens, sometimes almost completely absent in pale specimens. Eyes usually red. The general habitus of members of the *variabilis* group is exemplified by *variabilis* (Oman 1933b: pl. 1E).

The three species comprising the *variabilis* group may be differentiated by the characters in the following key:

1 Forewing with extra cross-veins in the inner anteapical cell area, the pale veins in contrast to the brown wings giving a maculated appearance.

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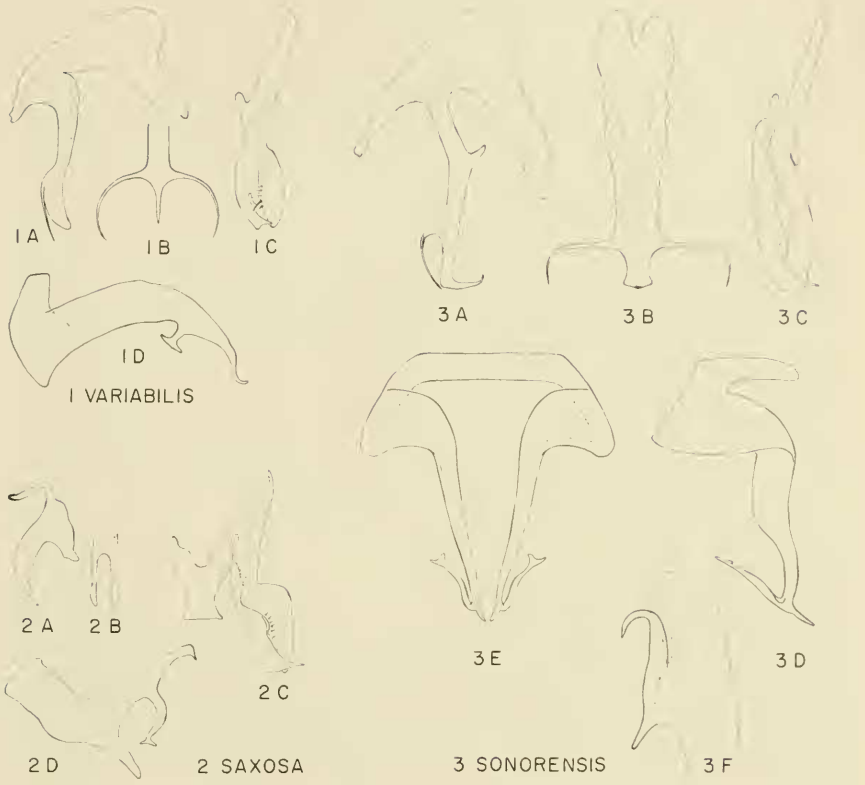
[1] Immediate publication secured by full payment of page charges—Editor.

[2] Complete references to literature prior to 1956 will be found in Metcalf's Bibliography of the Cicadelloidea, 1964a, and Fasc. VI, Part 14, Agalliidae, of his General Catalogue of the Homoptera, 1966a. References to these publications and pertinent literature that has appeared subsequent to 1955 are given under "References."



Figs. 1–3, *Agalliopsis* species: 1, *variabilis* Oman; 2, *saxosa* Ball; 3, *sonorensis*, n. sp. A = lateral view of aedeagus; 1B & 2B = dorsal view of aedeagal shaft; 3B = dorsal view of aedeagus; 1C & 3C = dorsal view of right style; 2C = dorsal view of right style and connective; D = lateral view of Xth segment; E = dorsal view of Xth segment; F = caudo-ventral view of right pygofer.

Female sternum VII nearly truncate, with a very small median v-shaped notch; male plates together triangular in outline, aedeagus without lateral rami distally ..... **saxosa** Ball

1′ Forewing without extra cross-veins, or rarely one, and lacking a maculated appearance. Female sternum VII without a v-shaped median notch; male plates rounded apically, only slightly tapering from base, aedeagus with slender lateral rami distally ..... (2)

2 (1′) Pygofer hook of male consisting of a short dorsally-directed spine-like process, or absent; Xth segment curved dorsad distally; female sternum VII with a broad, shallow median emargination posteriorly ..... **variabilis** Oman

2′(1′) Pygofer hook of male (fig. 3F) prominent, Xth segment deflexed distally; female sternum VII truncate ..... **sonorensis**, n. sp.

Agalliopsis sonorensis, n. sp.
(Fig. 3)

Larger than *saxosa* and more robust than either *saxosa* or *variabilis*, the robust appearance due primarily to the forewings not being closely appressed to the abdomen. Differing from both *saxosa* and *variabilis* in having a large, prominent pygofer hook in the male; in *saxosa* this structure is small and digitate, in *variabilis*, if present, it occurs only as a small sclerotized projection on the caudo-ventral margin of the pygofer. Length 3.6–3.9 mm.

Male plates digitate, slightly tapered distally, their tips rounded; Xth segment (fig. 3E) terminating in angular processes directed ventro-cephalad and also laterad; aedeagus (fig. 3A) with a large basal atrium, shaft broad and with a pair of subapical lateral rami, a single dorsal projection slightly basad of mid-point, and a terminal projection dorsally; gonopore terminal; pygofer hook prominent (fig. 3F), on caudo-ventral margin of pygofer. Female sternum VII truncate or very slightly emarginate posteriorly.

Color exceedingly variable, general color of male varying from brownish cinereous to fuscous, markings completely obscured in the darker specimens. General color of female varying from cinereous to tawny, the face often reddish tawny. Veins of forewing pale in the lighter colored specimens, but in darker males the basal three-fourths of the forewing is fuscous and the veins concolorous. Veins of apical area of forewing, and usually of the distal costal area as well usually concolorous with cells.

Holotype male and 62 paratypes representing both sexes labeled "Alamos, Sonora, Mexico, 9-9-63, M. W. Nielson Collector." Holotype and paratypes deposited in the U. S. National Museum by courtesy of Dr. Nielson. I have also seen specimens from Alamos collected by Dr. Nielson on April 7 and 8, 1966, and at black light Sept. 8, 1963. A single female labeled "Imuris, Sonora, Mexico, 9-20-64, M. W. Nielson, Collector" is also thought to be *sonorensis*.

Although the color variation in this species is extreme, the genitalic structures in the series examined are remarkably uniform. There is some variation in the shape of the reflexed distal part of the male Xth segment, which in some specimens is larger than illustrated, and in others the terminal part is boot-shaped in profile. Otherwise no variation of consequence was noted.

References

Metcalf, Z. P. 1964a. General Catalogue of the Homoptera. Fasc. VI Cicadelloidea. Bibliography of the Cicadelloidea (Homoptera: Auchenorrhyncha). Agric. Res. Serv., U.S. Dept. Agric. 349 pp.

———. 1966a. General Catalogue of the Homoptera. Fasc. VI Cicadelloidea. Part 14 Agalliidae. Agric. Res. Serv., U.S. Dept. Agric. 173 pp.

Oman, Paul. 1970a. Leafhoppers of the *Agalliopsis novella* complex (Homoptera: Cicadellidae). Proc. Ent. Soc. Wash. 72(1):1–29.